On-line Versus Face-to-Face Education:

Utilizing Technology to Increase Effectiveness

A Monograph
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In 2001, the Command and General Staff College (CGSC) shifted away from a selection process for Army Majors to attend Intermediate Level Education (ILE) of Professional Military Education (PME). Providing this education across the field invests in the future potential of Army mid-level leaders and equips the force with the requisite education to encourage operationally capable and adaptive leaders. However, operational requirements since the implementation of Universal ILE created backlogs in personnel waiting to attend ILE. The organizational culture focus on rewarding operational experience over education aided in building the backlog. Additionally, budget constraints on the horizon and guidance from Army leadership create an environment that mandates institutional change to confront the challenge of educating mid-grade officers. On-line education provides a potential answer to the backlog the Army has identified for ILE and provides flexibility for Field Grade Officer management. On-line education provides the ability to utilize effective adult education theory, capitalize on cost savings and maintain or improve education quality for ILE.

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Abstract

ON-LINE VERSUS FACE-TO-FACE EDUCATION: UTILIZING TECHNOLOGY TO INCREASE EFFECTIVENESS by MAJ Jimmy C. Salazar, USA, 38 pages.

In 2001, the Command and General Staff College (CGSC) shifted away from a selection process for Army Majors to attend Intermediate Level Education (ILE) of Professional Military Education (PME). Providing this education across the field invests in the future potential of Army mid-level leaders and equips the force with the requisite education to encourage operationally capable and adaptive leaders. However, operational requirements since the implementation of Universal ILE created backlogs in personnel waiting to attend ILE. The organizational culture focus on rewarding operational experience over education aided in building the backlog. Additionally, budget constraints on the horizon and guidance from Army leadership create an environment that mandates institutional change to confront the challenge of educating mid-grade officers.

On-line education provides a potential answer to the backlog the Army has identified for ILE and provides flexibility for Field Grade Officer management. Several criteria are required to analyze the overall benefit gained from expanding on-line programs. First, adult education theory provides a multitude of philosophies for achieving learning outcomes. However, Andragogy and learner-centered education provided in on-line education present excellent results. Secondly, the cost of on-line education compared to face-to-face education must be evaluated. The ability to utilize existing distance education infrastructure, modeled after existing civilian programs, and save on traditional face-to-face education costs makes on-line education an attractive option. However, on-line education should only be pursued if it provides a similar quality education as face-to-face learning in its ability to produce officers capable of successfully leading at the operational level. Therefore, an analysis of the potential tradeoffs in overall course quality becomes necessary. On-line education provides the ability to utilize effective adult education theory, capitalize on cost savings and maintain or improve education quality for ILE.

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Introduction

In 2001, the Command and General Staff College (CGSC) shifted away from a selection process for Army Majors to attend Intermediate Level Education (ILE) of Professional Military Education (PME). This decision was made, in part, because the Army acknowledged a requirement to provide an equal education to all Majors, not just those selected from the top 50 percent of their year group. Providing this education across the field invests in the future potential of Army mid-level leaders and equips the force with the requisite education to encourage operationally capable and adaptive leaders. However, operational requirements since the implementation of Universal ILE created backlogs in personnel waiting to attend ILE. The organizational culture focus on rewarding operational experience over education aided in building the backlog. Additionally, budget constraints on the horizon and guidance from Army leadership create an environment that mandates institutional change to confront the challenge of educating mid-grade officers.

On-line education provides a potential answer to the backlog the Army has identified for ILE and provides flexibility for Field Grade Officer management. Several criteria are required to analyze the overall benefit gained from expanding on-line programs. First, adult education theory provides a multitude of philosophies for achieving learning outcomes. However, Andragogy and learner centered education provided in on-line education presents excellent results. Secondly, the cost of on-line education compared to face-to-face education must be evaluated. The ability to utilize existing distance education infrastructure, model after existing civilian programs, and save on traditional face-to-face education costs makes on-line education an attractive option. However, on-line education should only be pursued if it provides a similar quality education as face-to-face learning in its ability to produce officers capable of successfully leading at the operational level. Therefore, an analysis of the potential tradeoffs in overall course quality becomes necessary. On-

line education provides the ability to utilize effective adult education theory, capitalize on cost savings and maintain education quality for ILE.

The TRADOC Commander, GEN Martin Dempsey explained, "the Army Learning Concept 2015 is an important component of our effort to drive change through a campaign of learning. It describes the learning environment we envision in 2015. It seeks to improve our learning model by leveraging technology without sacrificing standards so we can provide credible, rigorous, and relevant training and education for our force of combat-seasoned Soldiers and leaders."[1] In his comments, GEN Dempsey alludes to a major change in the Army Learning Concept, "the need to develop adaptive, thinking Soldiers and leaders capable of meeting the challenges of operational adaptability."[2] To enable a continuous adaptive leaning model the Army seeks, it aims to employ a leaner-centric environment. Unlike previous models that placed the instructor as the focal point of the classroom, the learner-centric environment is based around providing soldiers with "instructional strategies, expert facilitators and technologies that support the learner."[3] It is understood that the goals identified in the Army Learning Concept for 2015 take time to implement, so the document urges course proponents to start making changes utilizing the following framework:

> "(1) Convert most classroom experiences into collaborative problem-solving events led by facilitators (vice instructors) who engage learners to think and understand the relevance and context of what they learn. (2) Tailor learning to the individual learner's experience and competence level based on the results of a pre-test and/or assessment. (3) Dramatically reduce or eliminate instructor-led slide presentations and lectures and begin using a blended learning approach that incorporates virtual and constructive simulations, gaming technology, or other technology-delivered instruction."[4]

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[1] Department of the Army, "TRADOC Pamphlet 525-8-2: The U.S. Army Learning Concept for 201," (Fort Monroe, VA: Training and Doctrine Command, 2011), i. http://www.tradoc.army.mil/tpubs/pamndx.htm. (accessed 11 November, 2011).

[2] Ibid. 19.

[3] Ibid. 18.

[4] Ibid. 19.

While the guidance provided above gives instructors a blueprint for developing learner centric environments, faculty development programs and larger institutional change is required to see changes take hold across the Army or at a particular learning institution like CGSC. In reviewing the objectives the Army establishes, analyzing the ability of on-line education to create the leaner-centric model and offer the same, if not better, education as face-to-face education becomes necessary.

Since its inception, the Army placed a high value on educating the personnel filling the ranks in its formations. Initially, a literacy focused education aimed to raise the morale of soldiers by teaching them to read their Bibles while recovering from injuries at Valley Forge.[5] The successful program proved to be enough to spark interest in both the military institution and among soldiers to enhance the education level of the force. The Department of Defense went on to expand educational programs across the services. In pursuit of a capable and efficient force, the military helped to reduce the education gap between those with and without financial means far beyond civilian programs designed for similar ends.[6] The growth of the military during World War I and World War II provided the challenge of expanding opportunities to a large force. The military expanded its education efforts to include worldwide distance education programs offered through the United States Armed Forces Institute (USAFI) in the early 1940s. Just five years later, "USAFI had more than 300,000 annual enrollments through nearly 50 colleges and universities, offering more than 6,000 different correspondence courses."[7] The armed forces continued to innovate and grow education programs for its service members and as a result civilian education institutions and businesses can trace their distance programs to the pioneering efforts made by the military.

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[5] Cheryl J. Polson, "Military Contributions to Adult Education", *Handbook of Adult and Continuing Education* (Los Angeles: Sage Publications) 264.

[6] Ibid. 264.

[7] Ibid. 266.

Technology facilitated the growth of the educational opportunities within the military by allowing the development of extensive distance learning programs. Initial courses primarily utilized correspondence materials or video teleconferencing methods in distance education. These modes were generally limited in scope and success at least partially because of the technological limits at the time. However, technology advancements now allow for on-line applications that facilitate a collaborative environment between fellow students and the instructor. While some institutions continue to blend on-line and face-to-face modes of learning, others pursue a full on-line program to provide students and teachers maximum flexibility in achieving course and personal goals.[8]

Today, the Department of Defense is one of the country's largest providers of adult education.[9] Utilizing a mix of training and education, the Army applied several methods to ensuring service members were prepared to accomplish a variety of missions in both military and civilian roles.[10] In an effort to equip soldiers and leaders facing complex operational environments the Army invests in education as well as technology to prepare an adaptive force. Given the budget-constrained environment that continues to be debated, the Army will likely look for ways to save in all fields, including education. The previously mentioned concepts addressed in the Army Learning Concept for 2015 identify the necessity for innovative approaches to educating the force. These approaches not only allow the Army to maintain a dominant and educated force, but allow it to exploit technological advances to increase overall efficiency and retain the educational superiority of the force.

Utilizing on-line and distance learning for the Command and General Staff College is equally as productive as face-to-face instruction at producing adaptive and creative leaders at the

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[8] Rosalie Wells, *A Review of Computer Mediated Communication for Distance Education* (Boise: 2010) 5.

[9] Polson, "Military Contributions to Adult Education", 263.

[10] Ibid. 263.

operational level. Applying proper technological resources, faculty development programs and learner centered educational methods provides flexibility to the Professional Military Education system without reducing quality in learning outcomes. This monograph will identify possible solutions and recommendations for the utilization of on-line education for CGSC.

Methodology

This study aims to identify options that improve access and maintain quality of Professional Military Education (PME) opportunities and aid in providing flexibility to personnel management. The basis for the analysis conducted in this study flow from the vision established in the Army Learning Concept 2015, Guidelines for the Evaluation of Distance Education (On-line Learning) that govern CGSC on-line programs and existing adult education literature that provide the basis for a learner-centric education model.

This study begins by explaining the importance of quality PME for leaders at the operational level. It then provides a historical view of the Army educational system at Fort Leavenworth and its eventual transition to universal ILE. The study then reviews the educational requirements established by the Army, the Council of Regional Accrediting Commissions (C-RAC) and current adult education literature. Next, the identification and analysis of friction points regarding adult educational theory as it applies to face-to-face versus on-line education will be analyzed. Additionally, a review of the financial costs associated with on-line and distance education will be conducted. The monograph will identify and address the quality concerns inherent in on-line education. Finally, the monograph ends with conclusions and recommendations for the use of on-line education for ILE.

Educating Operational Leaders

The Army invests in the education of its personnel to ensure they are positioned to face the challenges present in uncertain environments both now and in the future. "The US Army Command and General Staff College (USACGSC) educates and develops leaders for full

spectrum joint, interagency and multinational operations; acts as lead agent for the Army's leader development program; and advances the art and science of the profession of arms in support of Army operational requirements."[11] ILE serves as the last PME most officers will receive for the remainder of their career. It must prepare them for the next position they execute, likely as Division and Brigade staff officers, but also for the any number of assignments they could receive prior to selection to the Senior Service College as senior leaders. Thus, "USACGSC seeks to produce successful graduates leading teams to solve complex problems throughout the spectrum of operations"[12] ILE plays a key role in preparing leaders for the challenges of planning and executing mission at the operational level. Ensuring quality curriculum, resources and methods is critical to shaping the educational environment in which students find themselves while completing ILE as well as during the entire continuum of education identified in the Army Learning Concept for 2015.

Brian Linn identifies that a segment of the military population believes that the United States military can overcome any challenge due to its superior leadership and the will to achieve victory. He asserts that these "Heroes" believe that it is the human spirit, more specifically the American spirit, which meets challenges with flexibility to adapt and overcome. Technology provides a tool, but it proves useless without the human leadership to will victory into happening.[13] Historically, Linn illustrates that the U.S. accomplish such a feat numerous times, including World War I, World War II and Korea. In all cases, the continuation of education at key points along a military career proved critical in creating the leaders capable to becoming "Heroes" when necessary.

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[11] United States Army Combined Arms Center, "About the Command and General Staff College," http://usacac.army.mil/cac2/cgsc/about.asp (accessed November 20, 2011).

[12] Ibid.

[13] Brian Linn, *The Echo of Battle* (Cambridge: Harvard University Press, 2007) 6-8.

Educational History at Fort Leavenworth

The United States military dedicates enormous amounts of resources to the military and civilian education of its service members in order to develop a professional force capable of critical thinking and adapting to uncertain environments. "Since its inception in 1881 as the School of Application for Infantry and Cavalry, the Command and General Staff College (CGSC) has evolved to meet the educational and operational needs of the United States Army. Since World War II, it has generally been known as the school for Army majors, though the College contains other schools and it educates officers from other military services and from other countries."[14]

Historically, the educational pursuits at Ft. Leavenworth allowed military thought to progress while budgets and training diminished. It was only during operationally heavy years that the second year of study was cut or the school closed all together. Educational pursuits at Ft. Leavenworth proved critical in the preparation for war during the interwar period. Matthew Matheny writes that "Only in the military's post-graduate schools could any real preparation for war be made in the minds of the officers who would fight it."[15] The modern day Command and General Staff College (CGSC) emerged from a need to educate Army Officers in large unit tactics and strategy. Since its inception, CGSC has undergone changes in the length of the course, curriculum of instruction and those selected to attend.

During World War II, the Leavenworth educated officers served in key command and staff roles applying what they learned. "What the graduates of Leavenworth provided- the

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[14] United States Army Combined Arms Center,(accessed 10 November, 2011).

[15] Mathew Matheny, *Carrying The War To The Enemy* (Norman: Oklahoma University Press, 2011) 70.

"leaven" to use Edward M. Coffman's word- was a shared language and attitude toward problem solving."[16]

Concurrently, technology development allowed the Army, like civilian institutions, to pursue varying methods of distance learning that expanded access to educational materials previously only available to a resident student. Regardless of the learning outcomes, distance learning became a secondary effort that was perceived as not providing the same educational benefit as face-to-face education.

In recent history, Army human resource management reinforced this idea by only allowing the top fifty percent of an officer year group to attend CGSC as a resident student and forcing all others to complete the course by correspondence for promotion selection to Lieutenant Colonel. Additionally, ongoing operational requirements make it difficult for human resource managers and individual service members to balance requirements for resident education and unit readiness. In most cases, the last decade of conflict forced individuals to sacrifice for operational requirements. The course that should prepare officers for their tenure as field grade leaders became an afterthought requirement for those seeking promotion. The education that could prove critical to the operational level leader became delayed far beyond the intended timeline.

For an institution that dedicates so many resources to the education of its force an interesting paradox emerges. The value of education is illustrated repeatedly in the history of the force and the commitment of resources by the organization. However, the organization very quickly bypasses the system to educate the force when operational requirements emerge. The Army constantly faces the challenge of educating its personnel while meeting deployment requirements. More flexibility in the educational system and human resource management would help provide a solution for the force.

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[16] Peter, Schifferle, *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II* (Lawrence: University Press of Kansas, 2010) 11.

Transition to Universal ILE

In 2001, the Army transitioned to the Universal ILE concept in order to ensure that all officers received appropriate military education. "This program became Universal ILE with education opportunities tailored to the individual officer depending on an officer's career field and functional area. All majors would attend ILE, and Operational Career Field (OPCF) officers would attend the Advanced Operations and Warfighting Course (AOWC) at Fort Leavenworth; thus they would relocate via a permanent change of station to Fort Leavenworth for 10 months with 3 months in ILE and 7 months in AOWC." [17] While the Army still maintained that self-directed learning remained important to all military professionals, it also acknowledge a requirement for the Army institution to invest academically to a professional and educated force. Institutionally, this presented a large departure from historical procedures for staff officer education. Whereas staff education was once a discriminator for promotion and career advancement, now it became another gate for all officers to pass regardless of their potential for promotion. The idea of educating the entire force, instead of a selected group, falls in line with the historical roots of education in the Army. Those that choose to utilize their private time for further education have and will likely continue to rise to the top regardless of the Army institutional changes to the PME system. Additionally, it could be said that the officer education system was and is part of creating a particular view of education in general. "The system was designed not only to begin the education of officers but also to require officers to continue self-development for their entire careers. The in-house schooling was not to replace self-study or the experiences of troop duty but to enhance both." [18]

Unintended effects of Universal ILE and operational requirements include a backlog of officers waiting to attend ILE at Fort Leavenworth. The overall downturn of operational

[17] Brian D. Prosser, *Universal ILE Concept and Reality* (Carlisle: US Army War College, 2007) 3.

[18] Schifferle, 20.

requirements potentially aids in remedying the situation. However, the size of the backlog does not allow for a quick solution to the problem. Additionally, if deployment cycles escalate again, the base problem for the vast majority of Majors passing through Fort Leavenworth to meet educational requirements still exists.

The education received during Universal ILE completes the military education an officer receives until potentially attending the Senior Service College. Even with backlogs in attendance, most officers manage to attend ILE before being promoted to Lieutenant Colonel. At its extended range, that places 10 years between formal Army education opportunities and begs the question of how much more effective that officer could have become given a shorter gap in education. Much of the experience at Fort Leavenworth comes in the Advanced Operational Warfighting Course (AOWC) portion of ILE that focuses primarily on staff positions for junior field grade officers, not those ready to be promoted to LTC. [19]

As the Army looks to consider approaches to meet the objectives in the Army Learning Concept for 2015, it must consider options that resolve problems created by the introduction of Universal ILE. Maintaining a professional and educated force, reducing the officer backlog for ILE and providing the ILE education at an early enough point to affect field grade performance are all important considerations for both academic and human resource managers. The difficult long-term goal of a balanced force requires managing these problems carefully.

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[19] Prosser, 7-8.

Foundational Guidelines

Requirements imposed by the Army leadership and accreditation associations provide guiding principles and policy that adult and on-line education programs must adhere to in order to meet the needs of the intended population and remain in good standing with the larger educational body. While the vast majority of the principles are descriptive in nature, it is important to identify and understand their specifics in order to ascertain the context that CGSC finds itself.

Guidelines for the Evaluation of Distance Education (On-line Learning)

The Council of Regional Accrediting Commissions (C-RAC) developed the Guidelines for the Evaluation of Distance Education (On-Line Learning) to assist in planning and evaluating distance education programs. By applying these guidelines to the Command and General Staff College, and other military distance learning programs, one can identify areas for improvement or expansion. The following lists the nine hallmarks of distance education identified by the C-RAC:

"1. On-line learning is appropriate to the institution's mission and purposes.
2. The Institution's plans for developing, sustaining and, if appropriate, expanding on-line learning offerings are integrated into its regular planning and evaluation process.
3. On-line learning is incorporated into the institution's system of governance and academic oversight.
4. Curricula for the institution's on-line learning offerings are coherent, cohesive and comparable in academic rigor to programs offered in traditional instructional formats.
5. The institution evaluates the effectiveness of its on-line learning offerings, including the extent to which the on-line learning goals are achieved, and uses the results of its evaluation to enhance the attainment of goals.
6. Faculty responsibility for delivering the on-line learning curricula and evaluating the students' success in achieving the on-line learning goals are appropriately qualified and effectively supported.
7. The institution provides effective student and academic services to support students enrolled in on-line learning offerings.
8. The institution provides sufficient resources to support and, if appropriate, expand its on-line learning offerings.
9. The institution assures the integrity of its on-line learning offerings."[20]

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[20] Council of Regional Accrediting Commissions (C-RAC), "Guidelines for the Evaluation of Distance Education (On-line Learning)," http://www.wacsenior.org/findit/files/forms/ C_RAC_Distane_ed_guidelines_7_31_2009.doc (accessed November 20, 2012).

Federal law requires compliance with item nine above, though all remain important for the integrity of an on-line program. Additionally, the C-RAC does not assess this list as an all-encompassing list, but rather a starting point for institutions to utilize.

Army Learning Concept for 2015

Figure 1 below illustrates the learner centric model described in the Army Learning Concept for 2015. It is important to note that the learner-centric model provides great flexibility of how a course can be established utilizing various methods of instruction and technologies. Additionally, the model depicts thirteen different features for coaches, mentors, instructors and facilitators to leverage for success. Nine of the thirteen apply to technology and on-line education directly and the other four apply to all modes of education.[21]

Figure 1: Learner-Centric model

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[21] Department of the Army, "TRADOC Pamphlet 525-8-2," 19.

Adult Educational Theory

Educational programs for both face-to-face and on-line education must be founded in fundamental learning theory. It is foundationally important for teachers to clearly understand the principles of learning and how adults learn.[22] In the case where students and teachers are separated in time and space by on-line learning, the foundational underpinning of the curriculum is that much more important. However, the number and complexity of learning theories make the task of analyzing all theories far too expansive. Instead, this study aims to identify several adult education concepts that are central to the face-to-face versus on-line education discussion. The following paragraphs will describe the concepts of pedagogy versus andragogy and constructivism versus behaviorism that form the heart of the debate. In order to achieve the goals established in the Army Learning Concept for 2015 and produce more effective education systems, the Army should utilize andragogy and constructivist models.

Pedagogy versus Andragogy

The first and most central concept debated is that of pedagogy versus andragogy. Pedagogy, the primary method used in grade school, teaches that because students come to the class with little knowledge or experience, they rely on the instructor to teach them the subject matter. The teacher maintains responsibility for the learning that takes place and examinations illustrate when students are ready to move on to the next level. Andragogy, first publicized by Malcolm Knowles in the 1968, acknowledges that students bring experience to the classroom that can be shared among the group as members discuss or solve relevant problems. Students are self-motivated to learn because the subject matter applies to their daily lives.[23] Simply put, debate centers on the idea of whom or what lay at the center of the classroom.

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[22] Sharan B. Merriam, Rosemary S. Caffarella, & Lisa M. Baumgertner, *Learning in Adulthood* (San Francisco: Jossey-Bass, 2007) 79-81.

[23] Ibid. 83-92.

Pedagogy proves advantageous for instructors in the speed at which it facilitates transmission of information and provides structure to a classroom. Pedagogy allows an experienced instructor to draw from years of situational analysis to focus on topics that he or she already knows students may have difficulty understanding. Andragogy accentuates what is important and relevant to the students because they drive the discussion. Because adult learners focus generally on what is relevant and immediately applicable, the discussion will likely focus on recent experience that illustrates concepts being addressed by the instructor.[24]

While one end of the spectrum places the instructor at the center of the classroom and holds them accountable for the learning the takes place, the other end of the spectrum places the student at the center of the classroom, if there is a classroom at all. These two theories were classically considered mutually exclusive, but many contemporary views allow for a blending of theories. "It does not give us the total picture, nor is it a panacea for fixing adult learning practices. Rather, it constitutes one piece of a rich mosaic of adult learning"[25] This allows an instructor great flexibility in methods. In a single session, an instructor can facilitate student experience sharing and bridge key gaps in knowledge when the discussion stalls to allow the process to continue.[26] Andragogy remains flexible in most all classroom environments, while pedagogy relies mostly on face-to-face instruction as its primary method.

Constructivist versus Behaviorist

Another friction point in adult education is found in the debate between constructivist and behaviorist schools of thought. Constructivist thought, from the teachings of John Dewey and Jean Piaget, "propose that cognitive capacities become more complex in response to individual's

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[24]Raymond J. Wlodkowski, *Enhancing Adult Motivation to Learn* (San Francisco: Jossey-Bass, 2008) 97.

[25] Merriam, Caffarella, and Baumgartner, 92.

[26] Daniel D. Pratt, *Five Perspectives On Teaching In Adult And Higher Education* (Malabar: Krieger Publishing Company, 2005) 134-139.

interactions with their physical and social environments. Development proceeds in a series of

qualitatively different "logics" in which the characteristics of meaning making in earlier stages

are distinct from those of later more mature stages.[27] Other prominent advocates of constructivist

thought that are relevant to the adult education debate include Donald Schon and Jack Mezirow.

Schon relates that utilizing experiential learning models allows students to learn by doing to

construct meaning for themselves. The last decade of operational experience places many mid-

grade officers into this school of thought. Mezirow teaches that learning is a transformational

experience that fundamentally changes how one thinks, highlighting a key difference between

training and education. Experience gained through multiple iterations of counter-insurgency

operations and analyzed through rational discourse, brought about a fundamental change in how

operations were conducted in Iraq. The rewriting of doctrine in response to operational

experience, especially FM 3-24 and ADP 3-0, illustrate the institutional response to individual

transformative learning during a counter-insurgency fight.

       Behaviorist thought, from the teachings of John B. Watson and B.F. Skinner are shaped

by three basic assumptions. "First, observable behavior rather than internal thought processes is

the focus of study, in particular, learning is manifested by a change in behavior. Second, the

environment shapes behavior; what one learns is determined by the elements in the environment,

not by the individual learner. And third, the principles of contiguity and reinforcement are central

to explaining the learning process." [28] Therefore the motivation in not implicit in the learner, but

instead provided by the instructor. The behaviorist model, as the name implies, places importance

on externally viewing behavior modification attached to a fixed end in knowledge intake that

must be achieved equally by all learners. By using behaviorist methods, students can be taught to

accomplish tasks quickly as component tasks to a complicated requirement, potentially building

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[27] M Cecil Smith & Kathleen Taylor, "Adult Development", *Handbook of Adult and Continuing Education* (Los Angeles: Sage Publications, 2010) 54.

[28] Merriam, Caffarella, and Baumgartner, 278-281.

self-confidence and enabling them to move on to other more complex achievements.[29] Using behaviorist thought places the responsibility for learning squarely on the shoulders of the teacher. Constructivist thought facilitates multiple methods of instruction, while behaviorist instruction focuses on in class transmission and testing.

Learning Lenses

There remains much debate in the educational community regarding what should fall under the large umbrella of education and appropriate methods for teaching, most mainstream educational literature identify a spectrum of learning styles that present a constant challenge to educators.[30] Rather than force all students to conform to an educator's preferred method of instruction, the learner-centric model requires educators to deliver a diverse program that allows all learners to participate in their individual style. "Brownsford, Brown, and Cocking, in an insightful book on the new science of learning, provide evidence that effective learning environments are framed within the convergence of four overlapping lenses. They argue that effective learning is community-centered, knowledge-centered, learner-centered, and assessment-centered."[31] Both face-to-face and on-line education programs provide an ability to shape the learning environment to take advantage of each learning lens. However, each provides method provides unique abilities in each lens. By understanding each of these lenses, one can better understand the unique aspects of on-line learning.

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[29] Merriam, Caffarella, and Baumgartner, 278-281.

[30] Catherine A. Hansman and Vivian W. Mott, *Adult Learners, Handbook of Adult and Continuing Education* (Los Angeles: Sage Publications, 2010) 16-18.

[31] Terry Anderson, ed., *The Theory And Practice Of On-line Learning (*Edmonton: AU Press, 2011) 47.

Learner-centered Lens

"The learner-centered lens includes awareness of the unique cognitive structures and understandings that the learners bring to the learning context. Thus, a teacher makes efforts to gain an understanding of the students' pre-existing knowledge, including any misconceptions that the learner starts with in their construction of new knowledge"[32] Learner-centered does not mean that the education program caters to every student's desire. The learning outcomes required by the educational institution and the individual teachers still play a definite factor in program design. Perhaps the correct label should be "learning-centered", instead of "learner-centered".[33] The learner-centered context mirrors most directly the guidance establish in the Army Learning Concept for 2015 and should provide the primary lens for analyzing programs for effectiveness.[34] The operational experience gained over the last decade by the average Major plays an extremely important role in the discussions at CGSC. The students, in most cases, provide the operational context for the theoretical, doctrinal and historical case studies examined in the curriculum.

Knowledge-centered Lens

The knowledge-centered lens posits that "each discipline or field of study contains a world view that provides often unique ways of understanding and talking about knowledge. Students need opportunities to experience this discourse, as well as the knowledge structures that undergraduate teaching affords."[35] The specific knowledge gained in an educational environment should be anchored in a certain field or it will likely be discarded as useless information. The knowledge-centered lens at CGSC must focus keenly on preparing Majors to assume roles as

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[32] Terry Anderson, ed., 35.

[33] Ibid. 35.

[34] Department of the Army, "TRADOC Pamphlet 525-8-2," 18-26.

[35] Anderson, ed., 37.

primary staff officers at the tactical and operational level.[36] While other broadening topics are generally necessary for Army leaders to understand, they do not make up the core knowledge required of CGSC graduates. The curriculum founded in doctrine, historical study and theory equips operational level leaders with the education necessary to accomplish their missions.

Assessment-centered Lens

The assessment-centered learning lens explains that there is a need for "formative evaluation that serves to motivate, inform, and provide feedback to both learners and teachers."[37] While the assessment provides critical feedback, utilizing this lens does not mean that constant standardized testing is required. Instructors should utilize multiple methods to provide both quantitative and qualitative feedback to students. The assessment-centered lens is especially important part of professionalizing the force. Ensuring officers have mastered basic doctrine, history and theory allows for common language and staff interoperability. Also necessary in this lens is the ability of students to provide feedback to the instructors and program managers thus allowing the program to improve for subsequent iterations.

Community-centered Lens

The community-centered environment "allows us to include the critical social components of learning."[38] Central to this lens is the ability to create new knowledge in a collaborative fashion. "Members of a learning community both support and challenge each other, leading to effective and relevant knowledge construction."[39] The community-centered lens can often be overlooked in the Army because of constant desire to build leadership and initiative in

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[36] Schifferle, 20.

[37] Anderson, ed., 38.

[38] Ibid. 40.

[39] Ibid. 39.

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individuals. However, the Army's inherent social nature adds weight to this perspective. Especially at the operational staff level, it becomes critically important to lead and be a member of a team that can share and synthesis relevant knowledge and experience.

In understanding these schools of thought individually, it becomes clear that, "What is needed is not a new stand-alone theory for the digital age, but a model that integrates the different theories to guide the design of on-line learning materials."[40] The Army Learning Concept for 2015 seems to be pushing for such an integration of theories to harness the analysis and success already achieved.

Education Costs

The cost of establishing an on-line program is a key consideration for any educational institution. The Army's historically sizable investment in on-line education illustrates its assessment that on-line education provides an excellent way to spread education to the large force at a reasonable cost. There would potentially be a sizeable initial cost of expanding CGSC distance learning programs to a fully on-line program. However, over time, research has shown that on-line education is far cheaper than face-to-face programs.[41] Cost savings from transportation costs for families moving to and from Ft. Leavenworth in a Permanent Change of Stations alone would be substantial. The challenge then becomes converting those savings into a successful on-line program with no loss in quality or learning outcomes.

Army Cost Perspective

While the cost of establishing an on-line program may be overwhelming for some institutions, the Army is in a unique position to utilize existing infrastructure and model existing

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[40] Ibid 18.

[41] Battaglino, T.B., Haldeman, M. & Laurans, E., *The Costs of On-line Learning* (Washington D.C.: Thomas B. Fordham Institute, 2012) Retrieved March 22, 2012, from http://www.edexcellence.net/publications/the-costs-of-on-line-learning.html.

civilian programs to improve cost effectiveness and decrease the volatile nature of invention in the on-line market. Unlike civilian institutions, an Army on-line institution will not need to seek and exploit a competitive economic advantage compared to other civilian institutions in order to survive. Managing costs within the budget, not making a profit, will drive decisions regarding the direction of the Army on-line institution. Many civilian on-line institutions failed because of "high cost of technology, poor decisions, competition, and the absence or appropriate (or any) business strategies."[42]

On-line education allow for diversity of thought in the classroom because of the many different people available for outreach at a much-reduced cost. The time and cost analysis sometimes makes it difficult to include guest speakers, subject matter experts or other interested parties into the educational conversation in a face-to-face environment. However, on-line education allows the option to include all of those parties using on-line chat, blogging or live video streaming. While technologically difficult for some, the option creates more tools for teachers and students to deepen their educational experience. The necessity to purchase technology and provide specialists to maintain in are fairly fixed costs. However, the ability to digitize instructional material provides a way to create a variable cost and cut budget requirements overall.[43]

On-line education provides the ability to use up to date and relevant learning materials. Face-to-face education generally utilizes actual textbooks to as the mode for assigned reading and instruction. Because the cost to replace texts would be exorbitant, most stay in place for a predetermined amount of time or until the institution can afford another text purchase. The Army started producing electronic manuals to offset the cost of printing manuals while still allowing

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[42] Anderson, ed., 62.

[43] Ibid. 68.

mass distribution of doctrine. On-line databases continue to facilitate the process and allow for minor changes in doctrine without financial concern. On-line education provides the ability to continually adapt curriculum and texts as needed ensuring student exposure to relevant information.[44] The ability to utilize daily publications as a class discussion item provides additional motivation for adult learners because they understand that they will be able to immediately apply what is learned instead of discarding it as historical knowledge.

Student and Teacher Costs

On-line education provides flexibility to students for completing requirements on their own schedule. The educational experience then becomes one more thing that must be managed on an already full schedule. Resident CGSC at Ft. Leavenworth provides students with an ability to focus singularly on academic requirements. Attempting to complete the academic requirements while still working a fulltime staff position would leave little time for academic considerations. In order to achieve the same learning outcomes using an on-line version of CGSC, students would need to be released from their operational staff positions to focus solely on education just as would be expected in a face-to-face classroom. Otherwise, students would potentially have to continue completing the on-line course using nights and weekends. The organizational resistance for such a change may prove too great to overcome, because on-line education is generally viewed as a lesser form of education. [45]

On-line programs force resource hardships on students that do not affect face-to-face programs. Facilities for students to conduct research or seek additional assistance may be lacking at some locations. Fort Leavenworth resourced the Combined Arms Research Library to "support the College's instructional and research programs through ownership of access to appropriate

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[44] Ibid. 5.

[45] Rena M. Palloff and Keith Pratt, *The Virtual Student* (San Francisco: Jossey-Bass, 2003) 77-88.

print and computerized resources."[46] The CARL provides students with an unequalled student environment. On-line students would have to make do with the resources available at their particular location.

Key to the success for both students and instructors of on-line education is the ability to utilize computer technology quickly and effectively. Seemingly simple tasks become frustrating and complicated when technology does not work the way it is designed or the user is not skilled enough to use it properly. The advancement of technology across the Army forces change even for those that resist the use of additional technology. A generational gap with the use of technology may pose a friction point for some technology users. A gap in technology skill requires additional training for both students and teachers for the use of on-line methods. A gap in technical support will likely always exist. These difficulties with on-line education add to the list of issues that can give it a negative perception amongst educators and students. In order to support a well-functioning on-line course, faculties spend more time preparing for class with no decrease in other work requires and no additional pay.[47] So just as students face difficulties with motivation to learn, instructors face motivation problems with incorporating technology into their curriculum that they may not have developed techniques for yet. Professional and trained faculties are the critical resource at every educational institution. If the faculty does not accept or utilize on-line education as an equal to face-to-face learning, the instruction in the program suffers.[48]

While there is risk inherent in investing in technology, the Army's use of existing resources and lessons learned from civilian institutions provides great mitigation and allows an

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[46] Combined Arms Research Library. "CARL Mission." http://usacac.army.mil/cac2/CGSC/CARL/ (accessed November 20, 2011).

[47] National Education Association, *A Survey of Traditional and Distance Learning Higher Education Members* (Washington D.C.: National Education Association,2000) 10.

[48] Ibid. 10.

ability to reasonably take advantage of the cost savings associated with on-line education. When

blended with other advantages regarding quality and effectiveness, on-line education becomes an

striking option.

Quality and Effectiveness

While some advantages of on-line learning may seem intuitive, such as flexibility, others

only appear after careful examination or experience with on-line learning. Even with its expanded

use, many lack experience with it and therefore misunderstand the uses and abilities of on-line

education. The analysis that follows is not comprehensive, but only identifies the most important

and applicable to military learners.

Better or Just as Good as Face-to-Face

Counter-intuitively, studies illustrate that traditional education methods utilized at the

vast majority of university may not provide the most effective methods for instruction. In fact, "a

2010 meta-analysis and review of on-line-learning studies, published by the U.S. Department of

Education, concluded that on-line learning was a good as or slightly more effective than

traditional face-to-face instruction."[49] The added use of technology provides the instructor a

variety of tools to assist students to participate in the learning environment in their own way.

Allowing students to participate on their own terms and methods instills a notion of ownership

and self-directed aspect to learning. This shift in attitude likely leads to increased motivation for

learning and helps to explain the effectiveness seen in on-line education.

Additionally, on-line learning provides an enormous range of options to both the student

and the teacher. The time and location the education takes place can remain up to the student to

choose or can potentially be negotiated between instructor and student to facilitate the appropriate

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[49] Robert W. Mendenhall, "How Technology Can Improve On-line Learning-and Learning in General," *The Chronicle of Higher Education*, November 6, 2011, http;//chronicle.com/article/How-Technology-Can-Improve/129616/ (accessed November 20, 2011).

learning outcomes. Various learning theories teach that students should be allowed to make learning contracts with the instructor that establish the requirements for the class based on the students' knowledge level and experience. [50] The fact that adult learners have a need to understand why they are learning something and desire an ability to immediately apply what they have learned makes the concept of student contracts attractive to a self-motived learner found in on-line education. The adult learning model proposed by the ALC 2015 provides instructors with the flexibility to create modular lesson plans for a segmented population or individuals based on the need and course objectives.[51]

On-line education provides amazing flexibility for human resource management across the Army. Flexibility in professional military education is critical due to current operational requirements and the backlog created by the last ten years of cyclic deployments. While face-to-face learning limits the number of personnel being educated to the size and numbers of classrooms, on-line education provides the ability maximize learning at times of opportunity instead of the current cycle offered in residence starting twice annually for CGSC. This type of human resource and educational management may also provide an opportunity to award constructive credit for some portions of CGSC based on the operational experience of the service member; especially those who are already close to promotion or have extenuating circumstances keeping them from attending the school in-residence. This flexibility allows CGSC to reduce the backlog of students, but also allows individual service members to make decisions about their own career path and supporting education.[52]

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[50] Michael Wonacott, "Blending Face-to-Face and Distance Learning Methods in Career and Adult Technical Education," (Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, 2002) 3.

[51] Department of the Army. "TRADOC Pamphlet 525-8-2," 21-22.

[52] Brian D. Prosser, *Universal ILE Concept and Reality* (Carlisle: US Army War College, 2007) 3.

On-line education allows for better freedom of expression and can include many different forms of participation. Each classroom takes on a character of its own as dominant personalities emerge because of the social norms of the classroom. [53] There are fewer options available to an instructor to gain observable participation from students. On-line participation with detailed posting requirements allows the use of blogs and chatting to ensure those who hesitate to speak or are spoken over in a face-to-face environment an ability to participate and have their opinion "heard" by the class. Utilizing this method of on-line education enables a balanced educational environment that limits extreme dominant personalities and includes all learners.

On-line education removes institutional and organizational pressures that cause power and privilege to be given to a dominant group in a classroom environment. Feminist educational theory discusses the importance of recognizing and confronting issues with power and privilege in adult education, as well as in society at large. Power and privilege means that an individual or group maintains a position of authority, control or advantage at the expense of members from other groups.[54] In the United States power and privilege generally resides with people who are members of the following groups: white, able-bodied, heterosexual, male, Christian, middle class, middle-aged, English-speaking. Historically, white males have the dominant voice in a classroom, while minorities and females tend to be more reserved. In a military classroom, the addition variables of branch, rank, and operational experience can make the historical trend more or less pronounced. While these trends to not hold true in every classroom, the fact that there will likely be dominant voices in every classroom means that the instructor must manage the dynamic to ensure participation. The idea of power and privilege in education remains somewhat controversial because those in power believe that they have worked hard to earn their privileges. Additionally, they believe that anybody that worked hard could also be a recipient of the

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[53] Merriam, Caffarella, and Baumgartner, 258.

[54] Merriam, Caffarella, and Baumgartner, 243.

privileges. However, the very nature of these privileges is unearned. Instead they are granted to members of the dominant group regardless of if they are wanted or aware of their existence.[55] Institutions and educators must be aware that some students, particularly those not mentioned in the dominant group, identify with the theory. Techniques exist to temper the impact of power and privilege in a classroom, but not having a "classroom" at all removes major barriers to balanced educational environment. On-line classes provide students with a bit of anonymity provides those without perceived power and privilege a voice in the on-line discussion and manages to remove power and privilege from those that may automatically have received it previously. In an on-line environment, students maintain a better opportunity for an equal voice.

Because on-line education provides options that are the same or better quality as face-to-face learning, it is an excellent tool for CGSC to expand. On-line education meets requirements based in adult education theory, provides flexibility to the Army and individual service members for stability and reducing.

Utilizing on-line forums allows for a different tool for facilitating learning. Face-to-face instruction assumes that all students learn best in a classroom environment with an instructor to facilitate learning. However, not all students may learn best in this environment, particularly if the instructor does not have an optimal classroom method.[56] Thus utilizing on-line education provides both the student and the instructor another option.

Not as Good as Face-to-Face

The disadvantages identified in on-line education stem from the advantages claimed by its proponents. In most cases, no compromise is possible and what remains is a difference of

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[55] Lisa Baumgartner, "White Whispers", *The Handbook of Race and Adult Education* (San Francisco: Jossey-Bass, 2010) 105-115.

[56] Merriam, Caffarella, and Baumgartner, 27-42.

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perspective and method. The disadvantages identified represent only the most important and applicable to military learners.

Unfortunately, not all students are prepared for the demands of self-directed or self-motivated learning that on-line curriculum requires. While some of the issues with failing to excel in self-directed learning may be attributed to simple laziness or procrastination, in most cases lack of self-efficacy proves to be the major issues. Many socio-economic factors contribute to the development or lack of self-efficacy.[57] Previous failures or marginal successes in educational ventures affect an adult learner's confidence in the classroom. Majors attending CGSC may have confidence in their professional ability. However, many may lack self-efficacy as students simply because they have not been a student since attending the Captain's Career Course. Adding the additional requirement of being an on-line student, likely a new experience for most students provides yet another obstacle to forming self-efficacy. Students must gain computer self-efficacy to fully utilize and engage in the educational experience. A lack of direct contact with an instructor added to the difficulty of computer skill requirements may inhibit students from developing self-efficacy in general and specifically as it applies to computer use.[58]

Adult learner motivation is closely tied to self-efficacy and performance in adult education for both face-to-face and on-line education. On-line education faces a steeper challenge of motivating students that remain separated in space and time. Several different factors contribute to motivation for adult learners. Houle asserts that adult learners generally fall into one of three categories: goal oriented learners, activity oriented learners and learning oriented learners. Goal oriented learners pursue education as a matter of achievement. This type of learner generally expects to receive a certification, degree or credential for their education efforts. Activity oriented learners generally find interest in the social aspect of learning. The topic of

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[57] Wlodkowski, 24-27.

[58] Merriam, Caffarella, and Baumgartner, 38-42.

education may be of less concern to them than the people around them in the classroom. Learning oriented learners generally categorize themselves as lifelong learners. Like activity oriented learners, the topic being studied may not matter, as long as they are learning something[59]. Principles identified in the Army Learning Concept for 2015 and CGSC mission ask students to go beyond the motivation of completing a requirement and engage the curriculum to prepare for the rest of their career in the Army and beyond. On-line education introduces a barrier into the already complex process of motiving adult learners. Not having a face-to-face environment potentially provides more opportunity for students not to fully engage in the educational process, hurting their own education and the education of the entire group by not sharing their experiences. Interaction and immediate feedback is not facilitated easily using on-line education.[60]

Lack of face-to-face learning limits the amount of active learning and group participation in which a student can engage. In class question and discussion sessions provide a unique ability for sharing of experiences across a broader and deeper scope of expertise.[61] On-line education may provide a forum for sharing experiences, but explaining an experience in text proves to be a difficult challenge. On-line forums do not allow the same type of discussion that clarifies a person's remarks or ideas easily, potentially causing some to limit their interaction with the class. On-line students also do not experience the non-verbal communication in the classroom that may help to provide context and clarity to a statement.

The Army is a social organization demands that demands an ability to work in and lead groups. On-line education limits the opportunities for further direct leadership development. Building leadership skills in embedded into the curriculum at CGSC, not just in the leadership

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[59] Hansman and Mott, 15.

[60] Palloff and Pratt, 3-13.

[61] Michael E. Wonacott, "Blending Face-to-Face and Distance Learning Methods in Adult and Career-Technical Education" (Ohio: Educational Resource Information Center) 3.

block of instruction, but as part of every class. The requirement to lead peers in discussion, group activities and exercises provides each student further development of leadership techniques. On-line education does not provide a similar ability to implicitly develop leadership skills. Instead, on-line education focuses on individual achievement and thought.

Introverted students potentially gain a larger voice in an on-line forum where they are required to post their thoughts in a blog. However, for those whom naturally have extroverted personalities, the non-verbal nature of on-line education presents a restriction to their personality that may keep them from participating as fully as they might otherwise. On-line learning may force students out of their comfort zone for learning. Over time, students gain from new learning experiences if they are open to the opportunity. However, in the short term or for those that resist the method, mediocre learning outcomes are likely.[62]

The academic rigor required for the CGSC resident course at Ft. Leavenworth serves as only part of the larger educational experience. Relationships formed during the year of study at Ft. Leavenworth provide strength across the mid-grade officer ranks that prove important for the remainder of the Army career. Much like the relationship that is formed between a student and teacher in a face-to-face classroom, the shared experience at Ft. Leavenworth creates a bond for fellow students that can be utilized during times of operational crisis. Working together in an on-line collaborative environment does not provide the same ability to create career and lifelong bonds. Though accepted as important, because this intangible aspect of face-to-face education cannot be quantitatively measured, it is unclear how much emphasis to place on its importance. Perhaps the intangible gains of the face-to-face education are only realized if the students engage and participate in the classroom, the same way that an instructor would expect in the virtual classroom.[63]

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[62] Palloff and Pratt, 29-34.

[63] Ibid. 49.

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Conclusions and Recommendations

An analysis of the literature illustrates that on-line education is just as good as face-to-face education and presents a great option for the Army to pursue to reduce costs, increase access and break the mold for military educational systems. The conclusions and recommendations detailed below take into account the necessity to maintain or improve quality and effectiveness of education while providing options that curtail backlogs and utilize financial prudence.

Conclusions

There are four relevant findings that appear in the analysis of options for education at CGSC. The first finding centers on the perception of quality in education programs. The primary misconception of on-line education is that it provides a lesser quality education when compared to a face-to-face model. Army historical regulation regarding the attendance of CGSC supported this misconception by only allowing the top fifty percent of a year group attend CGSC. Not only did students clearly see that they were not in the upper crust of their year group, but more importantly that they didn't deserve the good education one receives by attending CGSC face-to-face at Ft. Leavenworth. Interestingly, this perception holds true not only with the students but with the teachers. One study of university faculty identified, "Between one-fourth and one-half of respondents disagreed or strongly disagreed with any positive value statements about on-line teaching and learning."[64] These beliefs generally have little to do with actual experience in on-line education and more to do with beliefs about educational practices. Professors that conduct on-line classes tend to have positive feelings about the experience, while the feelings of those who have not conducted on-line classes remain less positive.[65] Both the Army and the civilian university population appear to generally believe that on-line programs provide a lower quality

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[64] Wade W. Fish and Peggy P. Gill, "Perception of On-line Instruction", *The Turkish On-line Journal of Educational Technology*, January, 2009.

[65] National Education Association, 7.

education. These beliefs underscore the concept that a double-standard exists regarding the use of technology in education. "Technology has fundamentally changed the productivity of every industry in America except education."[66] Yet because of ingrained beliefs, some institutions resist the expanded use of technology. Should the Army pursue the expansion of the on-line programs, at CGSC or elsewhere, a deliberate effort will be need to change the stigma currently associated with on-line education programs. Much research exists to show that there is no such disparity. The concept that on-line education provides less quality education has more to do with perception, than reality.

Secondly, quality education does not rely on a particular mode of delivery. Robert W. Mendenhall, president of Western Governors University, a nonprofit on-line university, explains that, "the quality of education is largely independent on the mode of delivery. Other variables are for more important. There is high-quality on-line learning, and there is high-quality classroom learning, just as there is low-quality in both settings."[67] The difference between high-quality and low-quality education programs is the method of instruction, not the mode of delivery. Therefore at the heart of the issue are the adult education theories used for program development and faculty development to utilize appropriate methods regardless of the mode of delivery. Additional investment in a faculty development program benefits both on-line and face-to-face programs because they are founded on the same principles. Particular techniques or lesson plans are an outgrowth of the educational theory.

The third finding is that while the CGSC continues improve the faculty development program and methods of instruction in ILE, there continues to be much room for improvement in reaching the lofty goals identified in the Army Learning Concept for 2015.[68] An analysis of the

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[66] Mendenhall, (accessed November 20, 2011).

[67] Mendenhall, (accessed November 20, 2011).

[68] Department of the Army. "TRADOC Pamphlet 525-8-2," 5-6.

educational theory at the heart of the on-line versus face-to-face debate illustrates that on-line education provides a variety of options for an instructor to facilitate learning using the Adult Learning Model. The vision establish in the Army Learning Concept for 2015 asks the innovative use of technology to expand learning opportunities. While instructors do sometimes utilize technology in innovative ways within the classroom, perhaps the most innovative use of technology would be to get rid of the classroom altogether.

Lastly, measuring the quality of any given educational program proves difficult given the multiple variables that can affect the learning outcome. More often than not, studies of quality utilize quantitative research methods that focus on enrollment, grades and graduation statistics instead of conducting costly and more lengthy qualitative studies that identify job performance and employer satisfaction.[69] Accurately measuring quality of education will continue to be a struggle for the CGSC.

Recommendations

In order to take advantage of the benefits afforded by on-line education programs, CGSC should expand or replace its distance education program to include a full on-line ILE course. In order to do so, several changes will be necessary to bring about the proper institutional, organizational and cultural changes to make an on-line program successful. CGSC requires a reevaluation of the Universal ILE policy, an expansion of the faculty development program and an aggressive strategy for addressing the perceived inadequacy of on-line education. A single effort allows for minimal change, while focusing on multiple lines of operation creates dynamic change in the system to expand access and flexibility while maintaining or improving educational outputs.

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[69] Mendenhall, (accessed November 20, 2011).

Development of a fully on-line ILE program is one of many reasons to consider a reevaluation of the current Universal ILE policy. The current backlog of officers waiting to attend ILE impacts the timing and therefore the ability to apply the education for the full duration of the Field Grade Officer service. Additionally, the financial costs associated with rotating the force through Fort Leavenworth and the removal of the stress of yet another move for military families present an appealing concept. Many options exist after reevaluating the Universal ILE policy including a return to the selection policy for the top half of each year group. An on-line ILE program provides extraordinary flexibility for nearly every option. Those pursuing the on-line option would require the similar time schedule as those conducting face-to-face education in order to be achieve the same or better learning outcomes. This would mean that completing the on-line ILE would require students to be released from other duty requirements for the period of education. While limiting the overall availability of Majors for operational requirements, it provides stability to military families, flexibility for human resource management and service member choice regarding learning environment. The expanded on-line program still meets the intent of the Universal ILE program to ensure Army provides a proper education to the force.

Accepting that on-line education is as good as face-to-face education allows the option to use blended education. Blended education utilizes the advantageous aspects of both on-line and face-to-face models to facilitate education. Not only does this form of education produce better results, it could potentially do so in a shorter timeframe and with less institutional resource requirements.

The vast majority of instructors have little to no experience with facilitating on-line programs. Therefore any decision to utilize on-line education would require an addition to the faculty development program. As discussed previously, the lack of experience with on-line education is partly to blame for the perception that it provides a lower quality education. Providing instruction to educators about how to plan and execute on-line programs broadens their experience base, potentially alters many assumptions held about on-line education and provides

instructors with a wealth of andragogical approaches that are also useful in face-to-face education. Additionally, the expansion of on-line instruction at other levels of Professional Military Education provides the ability for students to build a skillset for on-line collaboration before enrollment in Intermediate Level Education.

The modern organizational culture within the Army continually reinforces the perception that face-to-face education presents better quality that only those with historically high performance deserve. One could argue cancelling all distanec ILE distance-learning programs and require face-to-face education for all students. Extending the underlying logic would suggest that attending the resident course would improve performance. This logic fails to account for the underlying adult education theories that explain the truly important factors for improving learning outcomes. However, for many, this misdirected logic is accepted as truth because of the lack of experience with on-line education and the lack of a counter-narrative. The Army will require an aggressive campaign to assist in the explanation and understanding of the merits of the on-line education program. Especially in the current budget constrained environment, skeptics will argue that the Army is making the decision to pursue an on-line course in the hope of saving money. While the on-line program likely does save the Army money and cost is a consideration, cost alone should not drive the need for on-line programs. Soldiers and the American populous must understand and recognize the underlying logic and value of the on-line program in order to maintain their trust. The Army's already expanded use of blogging and social media may help the force adapt to the increased use of technology to facilitate learning and operations in general.

Because on-line education is as good as face-to-face education, CGSC should expand or replace its distance education program to include a full on-line ILE course. Making the proper institutional, organizational and cultural changes will help facilitate a successful on-line program and will supply additional energy to existing face-to-face programs. A multifaceted approach creates dynamic change in the current system to improve educational outputs and provide

flexibility to the Army and individual service members to decide where and how they will be

educated for the operational needs of the Army.

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